

## TITLE

*Calibrachoa* Plant Named 'Kakegawa S71'

## BACKGROUND OF THE INVENTION

[0001] 'Kakegawa S71' originated from a hybridization made in February 2000 in Kakegawa, Japan. The female parent was a *Calibrachoa* breeding line with red-orange colored flowers and semi-creeping habit known as 0B-11. The male parent was a *Calibrachoa* 'Kakegawa S52' (co-pending US Patent Application Serial No. 10/402,380).

[0002] In August 2000, F<sub>1</sub> seed was sown from this cross and eighty plants were transplanted to outdoors. These plants ranged from mounding to semi-creeping habit and orange to rose flower color. One plant with semi-creeping habit, light orange petals and red-orange petal mid-veins was selected and vegetatively propagated. In February 2001, this selection was vegetatively propagated again and evaluated in 9 cm hanging pots in a greenhouse and in an open field.

[0003] The selection was further evaluated from new vegetative plants in Salinas, California during 2002. The selection was subsequently named 'Kakegawa S71' and was determined to have its characteristics firmly fixed in successive generations of asexual propagation.

## DESCRIPTION FOR PHOTOGRAPH

[0004] This new *Calibrachoa* plant is illustrated by the accompanying photograph which shows bloom and foliage of the plant in full color. The colors shown being as true as can be reasonably obtained by conventional photographic procedures.

[0005] Fig. 1 shows a close-up view of a single inflorescence.

[0006] Fig. 2 shows the mature inflorescence.

## DESCRIPTION OF THE GENUS *CALIBRACHOA* LLAVE & LEX.

[0007] The genus *Petunia* was originally established in 1803 by A. L. Jussieu, who described both *P. parviflora* and *P. nyctaginifloa* as type species. Using a non-horticultural system that selected the first mentioned species as the type species (lectotype), N. L. Britton and H. A. Brown declared *P. parviflora* as the type species for *Petunia* in 1913.

**[0008]** During the 1980's and 1990, H. J. Wijsman published a series of articles regarding the ancestry of *P. hybrida*, the Garden Petunia, and the inter-relationship of several species classified as *Petunia*. These studies discovered that *P. hybrida* and its ancestral species, *P. nyctaginiflora* (= *P. axillaris*) and *P. violacea* (= *P. integrifolia*), possessed 14 pairs of chromosomes while several other species, including *P. parviflora*, possessed 18 pairs of chromosomes. Since *P. parviflora* was the lectotype species for the *Petunia* genus, Wijsman and J. H. de Jong proposed transferring the 14 chromosome species to the genus *Stimoryne*. Horticulturists opposed reclassifying the Garden Petunia and in 1986, Wijsman proposed the alternative of making *P. nyctaginiflora* the lectotype species for *Petunia* and transferring the 18 chromosome species to another genus. The I. N. G. Committee adopted this proposal. By 1990, Wijsman had transferred several species, including *P. parviflora* (= *C. parviflora*) to *Calibrachoa*, originally established by Llave and Lexarza in 1825. *Calibrachoa parviflora* (= *C. mexicana* Llave & Lexarza) is now the type species for the genus *Calibrachoa*.

**[0009]** Classification of the current *Petunia* and *Calibrachoa* species is still in progress. New species are also being identified. Consequently, a proper description has not been written for the *Calibrachoa* genus. *Calibrachoa* can, however, be distinguished from *Petunia* based on the higher chromosome number, chromosome morphology, plant branching habit and type of flower bud aestivation. Whereas *Petunia* species bear a flower peduncle and one new stem from a node, *Calibrachoa* bear a flower peduncle and three stems. *Petunia* species have a cochlear corolla bud, a single outermost petal covers the other four, radially folded and terminally contorted petals. *Calibrachoa* flower buds are flat with all five petals linearly folded and the two lower petals forming a cover around the three other petals and fused together.

#### **ENVIRONMENTAL CONDITIONS FOR PLANT GROWTH**

**[0010]** The terminal 1.0 to 1.5 inches of an actively growing stem was excised. The vegetative cuttings were propagated in five to six weeks. The base of the cuttings were dipped for 1 to 2 seconds in a 1:9 solution of Dip 'N Grow (1 Dip 'N Grow: 9 water)

root-inducing solution immediately prior to sticking into the cells trays. Cuttings were stuck into plastic cell trays having 98 cells and containing a moistened peat moss-based growing medium. The cuttings were misted with water from overhead for 10 seconds every 30 minutes until sufficient roots were formed.

**[0011]** Rooted cuttings were transplanted and grown in 20 cm diameter plastic pots in a glass greenhouse located in Salinas, California. Pots contained a peat moss-based growing medium. Soluble fertilizer containing 20% nitrogen, 10% phosphorus and 20% potassium was applied once a day or every other day by overhead irrigation. Pots were top-dressed with a dry, slow release fertilizer containing 20% nitrogen, 10% phosphorus and 18% potassium. The typical average air temperature was 24°C.

#### **DETAILED DESCRIPTION OF THE NEW PLANT**

**[0012]** Data below collected on plants three months from rooted cutting. Five plants grown in 20 cm diameter pots were transplanted to a 41 cm hanging basket. Color references are to the RHS Colour Chart of The Royal Horticultural Society of London (RHS). The following traits and characteristics describe the new variety.

**[0013] Classification:**

Family - - *Solanaceae*.

Species - - *Calibrachoa* spp.

Common names - - Petunia.

**[0014] Parentage:**

Female parent - - Breeding line 0B - 11.

Male parent - - 'Kakegawa S52' (co-pending US Patent Application Serial No. 10/402,380).

**[0015] Growth:**

Habit - - Decumbent.

Height - - 23.0 cm.

Spread - - 115.0 cm when grown in a 41 cm hanging basket or pot, and using five 20 cm potted plants in the hanging basket.

Life cycle - - Perennial.

Form - - Branching.

Time to produce a rooted cutting - - 6 weeks.

Time to bloom from propagation - - 10 weeks.

Flowering requirements - - Will flower so long as day length is greater than 12 hours and temperatures exceed 13°C.

Resistance / susceptibility - - Excellent resistance to rain, heat and drought. Will not tolerate temperatures below 10°C. Plants are susceptible to *Botrytis*, powdery mildew, various stem and root rots and certain viruses, like Tobacco Mosaic Virus and Impatiens Necrotic Spotted Virus. Plants can be infested with aphids, leafminer, whitefly and various *Lepidoptera*.

**[0016]**

**Stems:**

Stem color - - RHS 144B (yellow-green).

Anthocyanin color - - RHS N77A (purple).

Pubescence - - Heavy.

Pubescence color - - RHS N155A (white).

Stem description - - Round.

Stem diameter - - 2.0 mm.

Internode length - - 1.5 - 2.5 cm.

**[0017]**

**Leaves:**

Leaf arrangement - - Alternate.

Leaf shape - - Elliptical.

Leaf tip - - Mucronate.

Leaf base - - Decurrent.

Leaf margin - - Entire.

Leaf surface - - Rough, dull.

Leaf length - - 2.0 cm.

Leaf width - - 1.0 cm.

Leaf color - - Upper surface: RHS 137A (green); lower surface: RHS 139B (green).

Leaf surface pubescence - - Slight.

Leaf surface pubescence color - - RHS 155B (white).

Petiole length - - 2.0 mm.

Petiole color - - RHS 138B (green).

Venation - - Pinnate.

**[0018]**

**Flowers:**

Inflorescence type - - Solitary.

Flowering habit - - Indeterminate.

Duration of flower life - - 6 days.

Shape - - The flowers are funnel shaped with five fissures and a shallow, yet prominent, indentation of the petal tip at the mid-vein.

Flower diameter - - 2.3 cm.

Calyx - - 5 sepals, free; 1.8 cm x 4 mm (L x W).

Sepal color - - RHS 145B (yellow-green).

Bud shape - - Ovate.

Bud surface - - Pubescent.

Bud color - - RHS 150B (yellow-green).

Peduncle length - - 2.0 - 2.5 cm.

Ovary - - Superior.

Placenta arrangement - - Central.

Stigma color - - RHS 150A (yellow).

Style color - - RHS 150B (yellow-green).

Corolla - - 5 petals, fused.

Petal pubescence - - Glabrous.

Petal size - - 1.5 cm x 1.0 cm.

Petal color - - Lobes, upper: RHS 37A (red) when young fading to RHS 20A (yellow-orange) with RHS 30D (orange-red) petal veins (mid-veins

and secondary veins) prior to senescence; lower RHS 47C (red) when young fading to RHS 15A (yellow) prior to senescence; Corolla tube: inner RHS 2A (yellow) with RHS 166A (greyed-orange) veins; outer RHS 2A (yellow).

Stamen number - - 5, free.

Stamen color - - RHS 150C (yellow-green).

Pollen color - - RHS 10A (yellow).

Fragrance - - Absent.

Seed production - - None.

#### **COMPARISON WITH MOST SIMILAR VARIETY**

**[0019]** 'Kakegawa S71' is a distinct variety of *Calibrachoa* owing to its light orange petal lobes with darker veins and yellow corolla tube. 'Kakegawa S71' is most similar to the variety 'Million Bells Terra Cotta' (US PP11,352); however, there are differences as shown in Table 1 below.

Table 1

	<b>'Kakegawa S71'</b>	<b>'Million Bells Terra Cotta'</b>
Upper Petal Color	RHS 37A (red) fading to RHS 20A (yellow-orange) with RHS 30D (orange-red) veins.	RHS 45B (red) fading to RHS 9C (yellow) with red veins. There is blending in between the two colors on most of the flowers.